List of Claims:

Claim 1 (currently amended): A method for use by a first modem to ~~of~~ establish~~ing~~ a connection with ~~between a first modem and~~ a second modem, said method comprising:

~~connecting said first modem and~~ calling said second modem via a telephone line;

performing a ~~handshaking~~ sequence in which identification data is transmitted between said first modem and said second modem, wherein said performing said sequence comprises:

transmitting a pseudo-randomly generated code word to said second modem;

receiving a scrambled code word from said second modem, wherein said scrambled code word is generated by scrambling said code word;

analyzing said scrambled code word; and

determining if said second modem meets a compatibility criteria based on said analyzing ~~opening a primary data channel~~.

Claim 2 (original): The method of claim 1 wherein said identification data comprises information selected from the group consisting of a platform identifier, a controller revision, a DSP revision, and a firmware revision.

Claim 3 (cancelled)

Claim ~~4~~ 3 (currently amended): The method of claim ~~3~~ 1 further comprising optimizing said connection based on said compatibility criteria.

Claim ~~5~~ 4 (original): The method of claim 1 further comprising optimizing said connection based on said identification data.

Claim ~~6~~ 5 (currently amended): ~~A~~ The method of ~~communicating from a first modem to a second modem~~ claim 1, wherein said sequence further comprising:

opening a primary data channel;

thereafter opening a second logical channel; and

~~using said second logical channel to~~ transmitting diagnostic/maintenance data to said second modem using said second logical channel.

Claim ~~7~~ 6 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises customer platform identification data.

Claim ~~8~~ 7 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises customer code revision identification data.

Claim ~~9~~ 8 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises modem initialization data.

Claim ~~10~~ 9 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises a remote query by said first modem of the responses of said second modem to AT commands.

Claim ~~11~~ 10 (currently amended): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises information regarding ~~the~~ a status of call waiting.

Claim ~~12~~ 11 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises remote network management information.

Claim ~~13~~ 12 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises system configuration data.

Claim ~~14~~ 13 (currently amended): The method of claim ~~6~~ 5 wherein said ~~transferring step~~ transmitting said diagnostic/maintenance data further comprises:

transmitting a command ~~from said first modem~~ to said second modem; and

~~transmitting~~ receiving a response from said second modem ~~to said first modem~~ in response to said command.

Claim ~~15~~ 14 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises firmware revision data transmitted from said first modem to said second modem.

Claim ~~16~~ 15 (original): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises uniquely generated call identification data.

Claim ~~17~~ 16 (original): The method of claim ~~16~~ 15 wherein said call identification data comprises time information.

Claim ~~18~~ 17 (original): The method of claim ~~16~~ 15 where in said call identification data comprises information regarding the types of modems being connected.

Claim 18 (original): The method of claim ~~16~~ 15 where in said call identification data comprises information regarding which telephone line is being used.

Claim ~~20~~ 19 (original): The method of claim ~~6~~ 5 wherein said second logical channel is used simultaneously with said primary data channel.

Claim ~~21~~ 20 (original): The method of claim ~~20~~ 19 further comprising:

analyzing said primary data channel and said second logical channel for usage; and

prioritizing said primary data channel if both said primary data channel and said second logical channel are simultaneously used.

Claim ~~22~~ 21 (currently amended): The method of claim ~~6~~ 5 further comprising transmitting said identification data on said second logical channel.

Claim ~~23~~ 22 (original): The method of claim ~~6~~ 5 wherein the diagnostic/maintenance data is used to optimize the connection of the first modem and the second modem.

Claim ~~24~~ 23 (currently amended): The method of claim ~~6~~ 5 further comprising sending AT commands ~~from the first modem~~ to the second modem on the second logical channel; and

~~sending~~ receiving a response to said AT commands from said second modem ~~to said first modem~~.

Claim ~~25~~ 24 (currently amended): The method of claim ~~6~~ 5 further comprising ~~sending~~ receiving AT commands from the second modem ~~to the first modem~~ on the second logical channel; and

~~sending~~ transmitting a response to said AT commands ~~from said first modem to said second modem~~.

Claim ~~26~~ 25 (currently amended): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises a remote query ~~by said first modem of the~~ to responses of said second modem to diagnostic query commands.

Claim ~~27~~ 26 (currently amended): The method of claim ~~6~~ 5 wherein said diagnostic/maintenance data comprises a random or pseudo-random number which indexes into a database uniquely or pseudo-uniquely identifying ~~the generated~~ call conditions.

Claim ~~28~~ 27 (currently amended): The method of claim ~~6~~ 5 further comprising:

sending a query command ~~from the first modem~~ to the second modem on said second logical channel; and

~~sending~~ receiving a response to said query commands from said second modem ~~to said first modem~~.

Claim ~~29~~ 28 (currently amended): The method of claim ~~6~~ 5 further comprising:

~~sending~~ receiving a query command from the second ~~modem to the first modem~~ on said second logical channel; and

~~sending~~ transmitting a response to said query commands ~~from said first modem~~ to said second modem.

Claim ~~30~~ 29 (currently amended): A modem identification method ~~of identifying a~~ for use by a first modem, said method comprising:

placing a call by said first modem to a ~~remote device~~ second modem;

entering a physical handshaking process;

transmitting a first modem manufacturer parameter ~~by said modem~~ to said ~~remote device~~ second modem during said physical handshaking process, wherein said first modem manufacture parameter identifies said first modem;

receiving a second modem manufacturer parameter from said second modem during said physical handshaking process, wherein said second modem manufacture parameter identifies said second modem; and

completing said physical handshaking process to establish a data communication session ~~between said modem and~~ with said ~~remote device~~ second modem.

Claim ~~31~~ 30 (currently amended): The method of claim ~~30~~ 29, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

Claim 32 (currently amended): The method of claim 30, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

Claim 33 (currently amended): The method of claim 30, wherein said first modem manufacturer parameter is transmitted as part of V.8.

Claim 34 (currently amended): A modem identification method ~~of identifying a~~ for use by a first modem, said first modem being in communication with a host, said method comprising:

placing a call by said first modem to a ~~remote device~~ second modem;

completing a physical handshaking process to establish a data communication session ~~between said modem and~~ with said ~~remote device~~ second modem;

establishing an error correction process ~~between said modem and~~ with said ~~remote device~~ second modem, said error correction process having a primary channel, for exchanging data between said host and said ~~remote device~~ second modem, and a secondary channel;

transmitting a first modem manufacturer parameter ~~by said modem~~ to said ~~remote device~~ second modem via said secondary channel, wherein said first modem manufacture parameter identifies said first modem;

receiving a second modem manufacturer parameter from said second modem via said secondary channel, wherein said second modem manufacture parameter identifies said second modem.

Claim 35 (currently amended): The method of claim 34, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

Claim 36 (currently amended): The method of claim 34, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

Claim ~~37~~ 36 (previously presented): The method of claim ~~34~~ 33, wherein said error correction process is based on V.42 Recommendation.

Claim ~~38~~ 37 (currently amended): A method of authenticating an identification process for use by a first modem in communication with a ~~remote device~~ second modem, said method comprising:

receiving a random code by said first modem from said ~~remote device~~ second modem;

scrambling said random code, in accordance with a predetermined scrambling process, to generate a scrambled code; ~~and~~

sending said scrambled code to said ~~remote device~~ second modem to confirm compatibility;

receiving a second modem manufacturer parameter from said second modem in response to said sending said scrambled code; and

transmitting a first modem manufacturer parameter to said second modem.

Claim 39 (cancelled)

Claim ~~40~~ 38 (previously presented): The method of claim ~~39~~ 37, wherein said transmitting occurs during a physical handshaking process.

Claim ~~41~~ 39 (previously presented): The method of claim ~~39~~ 37, wherein said transmitting occurs after a physical handshaking process.

Claim ~~42~~ 40 (currently amended): The method of claim ~~39~~ 37, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

Claim ~~43~~ 41 (currently amended): The method of claim ~~39~~ 37, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

Claim ~~44~~ 42 (previously presented): The method of claim ~~39~~ 38, wherein said transmitting occurs during an error correction process based on V.42 Recommendation.

Claim ~~45~~ 43 (currently amended): A first modem capable of ~~providing~~ exchanging identification data with a second modem, said first modem comprising:

a call module capable of placing a call to a remote device;

a handshaking module capable of entering a physical handshaking process with said ~~remote device~~ second modem; and

a transmitter capable of transmitting a first modem manufacturer parameter to said ~~remote device~~ second modem during said physical handshaking process;

a receiver capable of receiving a second modem manufacturer parameter from said second modem during said physical handshaking process;

wherein, after said transmitter transmits said first modem manufacturer parameter to said ~~remote device~~ second modem and said receiver receives said second modem manufacturer parameter from said second modem, said handshaking module completes said physical handshaking process to establish a data communication session ~~between~~ with said ~~remote device~~ second modem.

Claim ~~46~~ 44 (currently amended): The modem of claim ~~45~~ 43, wherein said first modem manufacturer parameter is a DSP revision of said first modem.

Claim ~~47~~ 45 (currently amended): The modem of claim ~~45~~ 43, wherein said first modem manufacturer parameter is a firmware revision of said first modem.

Cont.

Claim ~~48~~ 46 (currently amended): The modem of claim ~~45~~ 43, wherein said first modem manufacturer parameter is transmitted as part of V.8.